2003-005 SEQUENCE LISTING

								_							
<110>	AKZO	Nobe	N Le	/											
<120>	Babes	sia v	acci	ines											
<130>															
<160>	19														
<170>	Pater	PatentIn version 3.3													
<210> <211> <212> <213>	1 852 DNA Babesia canis														
<220> <221> <222>	CDS (50)	(82	20)												
<400> agtcga	1 tacc 1	ccga	agaat	ta gt	ctto	gtati	t aat	tcct	gtcg	ctat	ttca			ag ggt /s Gly	58
ttc tt Phe Ph 5	c gga e Gly	att Ile	att Ile	ttg Leu	tcc Ser 10	att Ile	att Ile	ttt Phe	gtt Val	cgt Arg 15	gcc Ala	gtt Val	agc Ser	tgc Cys	106
act ga Thr Gl 20	g gat u Asp	gag Glu	aaa Lys	agg Arg 25	gat Asp	agt Ser	gtc Val	gtc Val	gag Glu 30	ggc Gly	gct Ala	acg Thr	tcc Ser	gtt Val 35	154
gaa gc Glu Al	c agc a Ser	tta Leu	aag Lys 40	ga g Gl u	cag Gln	atc Ile	gac Asp	tgg Trp 45	ctc Leu	gct Ala	gaa Glu	cgt Arg	tat Tyr 50	tcc Ser	202
gct ga Ala As	c ttg p Leu	act Thr 55	aac Asn	aaa Lys	gac Asp	act Thr	tca Ser 60	aaa Lys	tgg Trp	aat Asn	acc Thr	gac Asp 65	gag Glu	aag Lys	250
gt g aa Val Ly	g gag s Glu 70	ctg Leu	ttg Leu	aat Asn	gag Glu	aag Lys 75	gct Ala	gtt Val	ggc Gly	ata Ile	gag Glu 80	tct Ser	cgc Arg	ctt Leu	298
ctt gc Leu Al 85	a Ile														346
ggc gt Gly Va 100	c aac 1 Asn	gaa Glu	act Thr	ccc Pro 105	gct Ala	cat His	gtc Val	gct Ala	aac Asn 110	agg Arg	gtg Val	tca Ser	ccc Pro	gga Gly 115	394
gac gc Asp Al	c atc a Ile	tcc Ser	atg Met 120	ct c Leu	tac Tyr	gtg Val	ctt Leu	tct Ser 125	atc Ile	act Thr	cac His	agg Arg	gaa Glu 130	ttg Leu	442
tct ag Ser Se	c ctt r Leu	aag Lys 135	aat Asn	aag Lys	atc Ile	gat Asp	gaa Glu 140	tgg Trp	aag Lys	aag Lys	gtc Val	aag Lys 145	gca Ala	tct Ser	490

gaa gat ggc acc aaa gt g atc caa aat atc aag gac gac agg act aac	538
Ğlu Asp Ğly Thr Lys Val Ile Gln Asn Ile Lys Asp Asp Arg Thr Asn 150 155 160	
acc tgg ttc gtt gcc cat gga ttc aag gta gct gag ctc aac gat gtc Thr Trp Phe Val Ala Hi s Gly Phe Lys Val Ala Glu Leu Asn Asp Val 165 170 175	586
acc ctt gag aaa ctt gca aca gtg gtt aac gaa ttg gtg tcc cac aaa Thr Leu Glu Lys Leu Ala Thr Val Val Asn Glu Leu Val Ser His Lys 180 185 190	634
gat atg att tac att aac gac gct atg aag caa aac gtt gat aaa tgg Asp Met Ile Tyr Ile Asn Asp Ala Met Lys Gln Asn Val Asp Lys Trp 200 205 210	682
acc aag gag gag tct ga a aga ttg gcc atg atg gct gaa cag ggt ata Thr Lys Glu Glu Ser Gl u Arg Leu Ala Met Met Ala Glu Gln Gly Ile 215 220 225	730
tct gga gcc aag ggt aa g aag gat gga ttc tca ttc gcc ggt ctt agt Ser Gly Ala Lys Gly Lys Lys Asp Gly Phe Ser Phe Ala Gly Leu Ser 230 235 240	778
gtc atc agc ctt ctt gtt gcc gcc gtc gcg gtt gtg gtc taa Val Ile Ser Leu Leu Val Ala Ala Val Ala Val Val 245 250 255	820
gaggttaagg atgactattt gtgggcgtaa tg	852
<210> 2	
<211> 256 <212> PRT <213> Babesia canis	
<212> PRT	
<212> PRT <213> Babesia canis	
<pre><212> PRT <213> Babesia canis <400> 2 Met Lys Gly Phe Phe Gly Ile Ile Leu Ser Ile Ile Phe Val Arg Ala</pre>	
<pre><212> PRT <213> Babesia canis <400> 2 Met Lys Gly Phe Phe Gly Ile Ile Leu Ser Ile Ile Phe Val Arg Ala 1</pre>	
<pre><212> PRT <213> Babesia canis <400> 2 Met Lys Gly Phe Phe Gly Ile Ile Leu Ser Ile Ile Phe Val Arg Ala 1</pre>	
<pre><212> PRT <213> Babesia canis <400> 2 Met Lys Gly Phe Phe Gly Ile Ile Leu Ser Ile Ile Phe Val Arg Ala 1</pre>	
<pre><212> PRT <213> Babesia canis <400> 2 Met Lys Gly Phe Phe Gly Ile Ile Leu Ser Ile Ile Phe Val Arg Ala 1</pre>	

105

110

Ser Pro Gly Asp Ala Ile Ser Met Leu Tyr Val Leu Ser Ile Thr His 115 120 125 Arg Glu Leu Ser Ser Leu Lys Asn Lys Ile Asp Glu Trp Lys Lys Val 130 135 140 Lys Ala Ser Glu Asp Gly Thr Lys Val Ile Gln Asn Ile Lys Asp Asp 145 150 155 160 Arg Thr Asn Thr Trp Phe Val Ala His Gly Phe Lys Val Ala Glu Leu 165 170 175 Asn Asp Val Thr Leu Gl**u Lys Leu Ala Thr Val Val Asn Glu Leu Val** Ser His Lys Asp Met Ile Tyr Ile Asn Asp Ala Met Lys Gln Asn Val 195 200 205 Asp Lys Trp Thr Lys Glu Glu Ser Glu Arg Leu Ala Met Met Ala Glu Gln Gly Ile Ser Gly Ala Lys Gly Lys Lys Asp Gly Phe Ser Phe Ala 225 230 235 240 Gly Leu Ser Val Ile Ser Leu Leu Val Ala Ala Val Ala Val Val Val <210> <211> 845 <212> DNA <213> Babesia canis <220> <221> CDS (2)..(784)<400> a gtc gat acc tcc gag aat agt ctt gta tta atc ctg tcg cta ttc aca Val Asp Thr Ser Glu Asn Ser Leu Val Leu Ile Leu Ser Leu Phe Thr 1 5 10 15 49 atg aag ggt ttc ttc gga att att ttg tct att att ttc gtt cgt gcc Met Lys Gly Phe Phe Gly Ile Ile Leu Ser Ile Ile Phe Val Arg Ala 20 25 3097 gtt agc tgc act gag gat gag aac agg gat agt gtc gtc gag ggc gct Val Ser Cys Thr Glu Asp Glu Asn Arg Asp Ser Val Val Glu Gly Ala 35 40 45 145 acg tcc gtt gaa gcc agc tta aag gag cag atc gac tgg ctc gct gaa 193 Page 3

Thr		۷a٦	Glu	Ala	Ser		Lys	Glu		003-0 Ile	Asp	тгр	Leu	Ala	Glu	
cgt Arg 65	tat Tyr	tcc Ser	gct Ala	gac Asp	ttg Leu 70	55 act Thr	aac Asn	aaa Lys	gac Asp	act Thr 75	tca Ser	aaa Lys	tgg Trp	aat Asn	acc Thr 80	241
gaa Glu	gag Glu	cag Gln	gtg Val	aag Lys 85	ga g Gl u	ctg Leu	ttg Leu	aat Asn	gag Glu 90	aag Lys	gct Ala	gtt Val	ggc Gly	ata Ile 95	gag Glu	289
tct Ser	cgc Arg	ctt Leu	ctt Leu 100	gcc Ala	att Ile	gct Ala	aag Lys	gag Glu 105	ttc Phe	cac His	aaa Lys	ttg Leu	aag Lys 110	tcc Ser	gtt Val	337
ct g Leu	tgc Cys	acc Thr 115	ggc Gly	gtc Val	aac Asn	gaa Glu	act Thr 120	ccc Pro	gct Ala	cat His	gtc Val	gct Ala 125	aac Asn	agg Arg	gtg Val	385
tca Ser	ccc Pro 130	gga Gly	gac Asp	gcc Ala	atc Ile	tcc Ser 135	atg Met	ctt Leu	tac Tyr	gtg Val	ctt Leu 140	cct Pro	aac Asn	act Thr	cac His	433
													aag Lys			481
aag Lys	gca Ala	tct Ser	gac Asp	aat Asn 165	gg c Gly	acc Thr	aat Asn	gtg val	atc Ile 170	aaa Lys	aat Asn	atc Ile	aag Lys	gac Asp 175	gac Asp	529
agg Arg	act Thr	aac Asn	acc Thr 180	tgg Trp	tt c Phe	gtt Val	gcc Ala	cat His 185	gga Gly	ttc Phe	aag Lys	gta Val	gct Ala 190	gag Glu	ctc Leu	577
aac As n	gat Asp	gta Val 195	acc Thr	ctt Leu	ga g Gl u	aaa Lys	ctt Leu 200	gca Ala	aca Thr	gtg Val	gtt Val	aaa Lys 205	aaa Lys	ttg Leu	gtg Val	625
tc c Ser	cac His 210	aaa Lys	gat Asp	atg Met	aa a Ly s	tac Tyr 215	att Ile	aac Asn	aaa Lys	gtt Val	atg Met 220	aaa Lys	aaa Lys	tat Tyr	ttt Phe	673
gac Asp 225	agg Arg	cag Gln	aaa Lys	aag Lys	ga g Glu 230	gct Ala	gaa Glu	aga Arg	ttg Leu	acc Thr 235	aaa Lys	aag Lys	gcc Ala	gag Glu	aag Lys 240	721
ggt Gly	atg Met	tct Ser	gga Gly	ggt Gly 245	aa g Lys	tat Tyr	aag Lys	gtg Val	aaa Lys 250	ggt Gly	tat Tyr	gca Ala	gcc Ala	ccc Pro 255	tct Ser	769
		atg Met		tga	cca	tgca	tac a	aagt [.]	tgca	ac ta	aacaa	atta	a ca	tttt	gaag	824
cct	gtac ⁻	tcc 1	tcaa ⁻	tgag	ct c											845
<210 <210 <210 <210	1>	4 260 PRT Babes	sia (cani	5											

<400> 4

Val Asp Thr Ser Glu Asn Ser Leu Val Leu Ile Leu Ser Leu Phe Thr 1 5 10 15 Met Lys Gly Phe Phe Gly Ile Ile Leu Ser Ile Ile Phe Val Arg Ala 20 25 30 Val Ser Cys Thr Glu Asp Glu Asn Arg Asp Ser Val Val Glu Gly Ala Thr Ser Val Glu Ala Ser Leu Lys Glu Gln Ile Asp Trp Leu Ala Glu 50 55 60 Arg Tyr Ser Ala Asp Leu Thr Asn Lys Asp Thr Ser Lys Trp Asn Thr 65 70 75 80 Glu Glu Gln Val Lys Glu Leu Leu Asn Glu Lys Ala Val Gly Ile Glu 85 90 95 Ser Arg Leu Leu Ala Ile Ala Lys Glu Phe His Lys Leu Lys Ser Val Leu Cys Thr Gly Val Asn **Glu Thr Pro Ala His Val Ala Asn Arg Val** 115 **120 125** Ser Pro Gly Asp Ala Ile Ser Met Leu Tyr Val Leu Pro Asn Thr His Arg Glu Leu Ser Ser Leu Lys Asn Lys Ile Asp Glu Trp Lys Lys Val 145 150 155 160 Lys Ala Ser Asp Asn Gly Thr Asn Val Ile Lys Asn Ile Lys Asp Asp 165 170 175 Arg Thr Asn Thr Trp Phe Val Ala His Gly Phe Lys Val Ala Glu Leu Asn Asp Val Thr Leu Glu Lys Leu Ala Thr Val Val Lys Lys Leu Val Ser His Lys Asp Met Lys Tyr Ile Asn Lys Val Met Lys Lys Tyr Phe 210 215 220 Asp Arg Gln Lys Lys Glu Ala Glu Arg Leu Thr Lys Lys Ala Glu Lys 225 230 235 240 Gly Met Ser Gly Gly Lys Tyr Lys Val Lys Gly Tyr Ala Ala Pro Ser

Page 5

```
Thr Trp Met Leu
            260
      5
21
<210>
<211>
<212>
      DNA
<213>
      Artificial
<220>
<223> Primer
<400> 5
                                                                        21
tgatgaagcc ggcaagaagg t
<210> 6
<211>
<212>
      22
      DNA
      Artificial
<213>
<220>
<223>
      Primer
<400> 6
                                                                        22
tacatgatac cgaattcaat gg
<210>
<211> 27
<212> DNA
<213> Artificial
<220>
<223> Primer
<400> 7
ttacatcgtt gagctcagct accttga
                                                                        27
<210> 8
      22
<211>
<212> DNA
<213> Artificial
<220>
<223> Primer
<400> 8
                                                                        22
ccatggattc aaggtagctg ag
<210>
       9
       21
<211>
<212>
       DNA
<213>
      Artificial
<220>
<223>
      Primer
```

2003-005

<400> agtcga	9 tacc tccgagaata	g	21
<210> <211> <212> <213>	10 24 DNA Artificial		
<220> <223>	Primer		
<400> actgag	10 gatg agaacaggga	tagt	24
<210> <211> <212> <213>	11 21 DNA Artificial		
<220> <223>	Primer		
<400> catgga	11 ttca aggtagctga	g	21
<210> <211> <212> <213>	12 24 DNA Artificial		
<220> <223>	Primer		
<400> gaccac	12 aacc gcgacggcgg	caac	24
<210> <211> <212> <213>	13 21 DNA Artificial		
<220> <223>	Primer		
<400> gagctc	13 attg aggagtacag	g	21
<210> <211> <212> <213>	14 21 DNA Artificial		
<220> <223>	Primer		
<400> cattac	14 gccc acaaatagtc	a	21

2003-005

<210> <211> <212> <213>	15 33 DNA Artificial		
<220> <223>	Primer		
<400> attttg	15 gttc gtggatccac	gtgcactgag gat	33
<210> <211> <212> <213>	16 27 DNA Artificial		
<220> <223>	Primer		
<400> ccacaa	16 atag tcaagcttaa	cctctaa	27
	17 30 DNA Artificial		
<220> <223>	Primer		
	17 gaat ccaagcttct	tacccttggc	30
<210> <211> <212> <213>	18 23 DNA Artificial		
<220> <223>	Primer		
<400> cgactg	18 gagc acgaggacac	tga	23
<210> <211> <212> <213>	19 25 DNA Artificial		
<220> <223>	Primer		
<400>	19 aacg atacgctacg	taacq	25